

-2-

YOR999124US2

REMARKS

Claims 1-40 were originally presented in the subject continuing application. Claims 1, 17, 33, 36 and 40 were amended in a Response dated July 13, 2005. No claims have herein been amended, added or canceled. Therefore, claims 1-40 remain in this case.

The addition of new matter has been scrupulously avoided.

Applicants respectfully request reconsideration and withdrawal of the grounds of rejection and objection.

35 U.S.C. §103 Rejection

The final Office Action rejected claims 1-3, 6-10, 17-19, 22-26, 33-37, 39 and 40 under 35 U.S.C. §103, as allegedly obvious over Bracho (U.S. Patent No. 5,870,605) in view of Gai et al. (U.S. Patent No. 6,535,491; hereinafter "Gai") and Vaman et al. (U.S. Patent No. 6,011,780; hereinafter "Vaman"). Applicants respectfully, but most strenuously, traverse this rejection as it applies to the amended claims.

Claim 1 recites a method of reconfiguring publish/subscribe systems. The method comprises initiating a reconfiguration of a publish/subscribe system, and reconfiguring the publish/subscribe system, wherein no messages of the publish/subscribe system are lost during the reconfiguring.

The final Office Action admits that "Bracho in view of Gai does not explicitly disclose that no messages are lost during reconfiguration[.]" Instead, the final Office Action relies on Vaman for this aspect. More specifically, the final Office Action first cites to Vaman et al. at column 7, lines 1-5. However, this section of Vaman merely speaks to preventing resource failure. Applicants could find nothing in the cited section of Vaman regarding no messages being lost during reconfiguration.

The final Office Action also cites to Vaman at column 9, line 66 through column 10, line 1, which includes the phrase "lossless recovery of cells." However, a careful review of the

-3-

YOR999124US2

rest of Vaman reveals that this is the only place the word “lossless” or similar is used. In fact, Applicants were unable to find anyplace in Vaman where the concept of lossless recovery of cells is explained. Thus, Applicant submits Vaman fails to provide any description of how to actually achieve lossless recovery of cells, such that one skilled in the art would not be able to practice the invention that is alleged to be made obvious by the cited combination of references. Applicants submit the mere mention of lossless recovery of cells, without a teaching as to how to accomplish the same, is simply not enough to obviate the present invention as embodied in claim 1.

Therefore, Applicants submit that claim 1 cannot be made obvious over Bracho in view of Gai and Vaman.

Independent claims 17, 33, 36 and 40 each contain a limitation similar to that argued above with respect to claim 1. Thus, the remarks made above are equally applicable thereto. Therefore, Applicants submit that claims 17, 33, 36 and 40 also cannot be made obvious over the cited art.

Applicants submit that the dependent claims are allowable for the same reasons as the independent claims from which they directly or ultimately depend, as well as for their additional limitations.

For example, claim 5 recites that the publish/subscribe system comprises an ordering requirement for delivery of one or more messages from at least one node to at least one other node of the publish/subscribe system, wherein the reconfiguring preserves the ordering of delivery of the one or more messages.

Against claim 5, the final Office Action admits that “Bracho in view of Gai and Vaman and Moskowitz does not disclose preserving message order during system reconfiguration.” Instead, the final Office Action cites to Shaffer et al. (U.S. Patent No. 6,236,642; hereinafter, “Shaffer”) against this aspect of claim 5.

As an initial matter, Applicants submit that Shaffer is improperly cited against the present application as non-analogous art.

-4-

YOR999124US2

The determination that a reference is nonanalogous art involves two steps. *Heidelberger Druckmaschinen AG v. Hantscho Commercial Products Inc.*, 30 U.S.P.Q.2d 1377, 1379 (Fed. Cir. 1994); *In re Wood*, 599 F.2d 1032, 202 U.S.P.Q. 171, 174 (CCPA 1979). First, the reference is reviewed as to whether it is within the field of the Applicants' endeavor. *Id.* Second, if the reference is not in the field of endeavor, then a determination is made as to whether the reference is reasonably pertinent to the particular problem the inventor sought to solve. *Id.*

In determining what the field of endeavor is, courts have looked to the field of endeavor set out in a patent or patent application. See, e.g., *In re Wood and Eversole*, 202 U.S.P.Q. 171 (CCPA 1979).

In the present case, the technical field is set out in numbered paragraph 0007 as reconfiguring a routing network, and, in particular, non-disruptively reconfiguring a *publish/subscribe system* without losing or reordering messages of the system during the reconfiguration.

Applicants submit that Shaffer is a point-to-point system (cellular communications), and not a publish/subscribe system. Therefore, Applicants submit Shaffer is not within the field of endeavor of the present application.

Moving on to the second part of the test, it must be determined whether Shaffer is reasonably pertinent to the problem sought to be solved by the present invention. The problem is set out in numbered paragraphs 0010 and 0011 as how to handle changes of topology (reconfiguration) in a publish/subscribe system.

Applicants submit that Shaffer is not reasonably pertinent to the problem sought to be solved by the present invention. A reordering scheme for a point-to-point system (Shaffer) simply would not work after a reconfiguration in a publish/subscribe system. A publish/subscribe system differs from the point-to-point environment of Shaffer in at least two ways: (1) each published message may be sent to multiple subscribers, possibly a large number; and (2) each subscriber will receive a different subset of the stream, based upon the details of his subscription – e.g., a first subscriber might receive messages 2, 5, 7, and 9, while a second

**BEST AVAILABLE COPY**

-5-

YOR999124US2

receives 4, 7, 8, and 10. A subscriber receiving message 10 without message 9 will not know whether message 9 was not received because it does not satisfy the subscription, or whether message 9 did satisfy the subscription, but was delayed because of taking a different path. The technical expression for the above is that the sequence number set for the received messages is "sparse" and not "dense". Therefore, delaying processing message 10 until message 9 arrives will not work, since message 9 may never arrive at a given subscriber. Requesting retransmission, as cited in Shaffer col. 5, lines 56-67, for non-real-time data, will not work, since thousands of subscribers may flood the network with retransmission requests for a single publisher. Changing delay times, as discussed in Shaffer col. 6, lines 8-10, will not work because messages travel to multiple subscribers, not to a single subscriber, over a variety of paths exhibiting a variety and unpredictable number of delays. However useful Shaffer's invention may be for point-to-point packet telephony, the teachings regarding preserving message ordering do not carry over to the completely different environment of the present invention, namely a publish/subscribe system in the face of reconfigurations.

Thus, Applicants submit that Shaffer is not reasonably pertinent to the problem sought to be solved. Therefore, Applicants submit that Shaffer is non-analogous art.

For the same reasons that Shaffer is not reasonably pertinent, Applicants submit it also does not make claim 5 obvious, either alone or in combination with the other multiple references cited.

Claims 21 and 38 contain similar limitations to those argued above with respect to claim 5. Thus, the remarks made above with respect to claim 5 are equally applicable to those claims. Therefore, claims 21 and 38 also cannot be rendered obvious over Bracho, Gai, Vaman, Moskowitz and Shaffer.

**Objection to Claims**

The Office Action objected to claims 15-16 and 31-32 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitation of the base claim and any intervening claims.

-6-

YOR999124US2

While Applicants sincerely appreciate the indication of allowable subject matter, in light of the above remarks, Applicants respectfully decline at this time to so amend the noted claims. However, Applicants expressly retain the right to so amend the claims subsequently in prosecution if later deemed appropriate in light of the situation.

### CONCLUSION

Applicants submit that the dependent claims not specifically addressed herein are allowable for the same reasons as the independent claims from which they directly or ultimately depend, as well as for their additional limitations.

For all the above reasons, Applicants maintain that the claims of the subject application define patentable subject matter and earnestly request allowance of claims 1-40.

If a telephone conference would be of assistance in advancing prosecution of the subject application, Applicants' undersigned attorney invites the Examiner to telephone him at the number provided.

Respectfully submitted,



Wayne F. Reinke  
Attorney for Applicants  
Registration No.: 36,650

Dated: November 23, 2005.

HESLIN ROTHENBERG FARLEY & MESITI P.C.  
5 Columbia Circle  
Albany, New York 12203-5160  
Telephone: (518) 452-5600  
Facsimile: (518) 452-5579